



PATENT
Attorney Docket No. 915-005.043-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of:

Miska HANNUKSELA : Confirmation No.: 3558
Serial No: 10/782,372 : Examiner: C. ANYIKRE
Filed: February 18, 2004 : Group Art Unit: 2482

For: **PICTURE DECODING METHOD**

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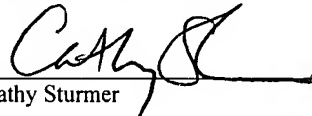
APPEAL BRIEF

Sir:

This Appeal Brief is in furtherance of the Notice of Appeal filed January 9, 2012. The Notice of Appeal was filed in response to the final Office Action of October 5, 2011.

CERTIFICATE OF MAILING

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is Nokia Corporation, a corporation organized under the laws of Finland.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

There are no related appeals or interferences.

III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 12-25 and 27-30 are pending in the application, and claims 1-11 and 26 have been cancelled. Claims 12-25 and 27-30 are rejected in the final Office Action of October 5, 2011, and the rejection of claims 12-25 and 27-30 is being appealed.

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

No after final amendments were submitted, and therefore all amendments filed have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Independent claim 12 is directed to a method for ordering encoded pictures including a first and a second encoded picture, and the method of claim 12 includes forming at least a first transmission unit on the basis of the first encoded picture. *See* specification page 20, lines 34-45; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The method of claim 12 further includes forming at least a second transmission unit on the basis of the second encoded picture. *See* specification page 20, lines 35-36; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. In the method of claim 12, the first and second transmission units are configured for network transmission and are different from video coding units of the first and second encoded pictures. *See* specification page 32, lines 13-14; page 36, lines 25-26. The method of claim 12 further includes defining a first identifier of the first transmission unit and a second identifier of the second transmission unit, the first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 21, lines 2-4; page 27, line 36—page 28,

line 2; page 29, lines 7-17; page 32, lines 26-27. In the method of claim 12, the first and the second identifiers are different from the video coding units of the first and the second encoded picture, and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 16 is directed to a device for ordering encoded pictures including a first and a second encoded picture, and the device of claim 16 includes an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 21, lines 8-10; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. Claim 16 states that the first and second transmission units are configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The device of claim 16 further includes a definer for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 21, lines 11-12. The first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. Furthermore, in claim 16 the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 20 is directed to an encoder for encoding pictures and for ordering encoded pictures including a first and a second encoded picture, the encoder of claim 20 includes an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 21, lines 19-21; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. Claim 20 states that the first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The encoder of claim 20 further includes a definer for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 21, lines 22-24. The first and

the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. Furthermore, in claim 20 the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time times of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 22 is directed to a decoder for decoding encoded pictures for forming decoded pictures, the encoded pictures including a first and a second encoded picture transmitted in at least a first transmission unit formed on the basis of the first encoded picture and in at least a second transmission unit formed on the basis of the second encoded picture. *See* specification page 21, lines 29-33; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. Claim 22 further states that the first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The decoder of claim 22 includes a processor for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 21, line 33—page 22, line 2. Furthermore, in claim 22 the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 23 is directed to a system that includes an encoder for encoding pictures and for ordering encoded pictures including a first and a second encoded picture. *See* specification page 22, lines 5-6. The encoder of the system of claim 23 includes an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 22, lines 6-9; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. Claim 23 further states that the first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The system of claim 23 also includes a decoder for

decoding the encoded pictures. *See* specification page 22, lines 9-10. The encoder of the system of claim 23 includes a definer for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 22, lines 10-12. The first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. Furthermore, the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34. The decoder of the system of claim 23 includes a processor for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of the first identifier and the second identifier. *See* specification page 22, lines 15-18.

Independent claim 24 is directed to a computer readable medium encoded with computer executable instructions for performing a method for ordering encoded pictures including a first and a second encoded picture. *See* specification page 22, lines 20-23. The method performed by the executable instructions also includes forming at least a first transmission unit on the basis of the first encoded picture, and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 22, lines 23-25; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The computer program of claims 24 further includes computer executable instructions for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 22, lines 25-27. The first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. Furthermore, in claim 24 the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 25 is directed to a computer readable medium encoded with computer executable instructions for performing a method for ordering encoded pictures including a first and a second encoded picture. *See* specification page 22, lines 20-23. The method performed by the executable instructions also includes forming at least a first transmission unit on the basis of the first encoded picture, and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 22, lines 23-25; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The computer program of claims 25 further includes computer executable instructions for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 22, lines 25-27. The first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. Furthermore, in claim 25 the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 27 is directed to a module for ordering encoded pictures for transmission, where the encoded pictures include a first and a second encoded picture, and the module includes an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture. *See* specification page 23, lines 20-22; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The module of claim 27 further includes a definer for defining a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 23, lines 22-24. The first and the second identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See*

specification page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. The first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 28 is directed to a module for reordering encoded pictures for decoding, where the encoded pictures include a first and a second encoded picture transmitted in at least a first transmission unit formed on the basis of the first encoded picture and in at least a second transmission unit formed on the basis of the second encoded picture. *See* specification page 23, lines 29-33; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The first and second transmission units are units configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The module of claim 28 includes a processor for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of a first identifier of the first transmission unit and a second identifier of the second transmission unit. *See* specification page 23, line 33—page 24, line 2; page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. The first and second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

Independent claim 30 is directed to a method for ordering encoded pictures including a first and a second encoded picture, and the method of claim 30 includes forming at least a first transmission unit encapsulating information of the first encoded picture. *See* specification page 20, lines 34-45; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. The method of claim 30 further includes forming at least a second transmission unit encapsulating information of the second encoded picture. *See* specification page 20, lines 35-36; page 27, lines 1-14; page 28, lines 23-25; page 31, lines 33-34. In the method of claim 30, the first and second transmission units are configured for network transmission and are different from video coding units of the first and second encoded picture. *See* specification page 32, lines 13-14; page 36, lines 25-26. The method of claim 30 also includes defining a first identifier in the first transmission unit and a second identifier in the second transmission unit, the first and the second

identifiers are indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit. *See* specification page 21, lines 2-4; page 27, line 36—page 28, line 2; page 29, lines 7-17; page 32, lines 26-27. In the method of claim 30, the first and the second identifiers are different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture. *See* specification page 27, lines 35-36; page 28, lines 32-34.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 12, 16, 20, 22-25 and 27-28 and 30 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hoogenboom et al. (U.S. Patent No. 5,517,250) in view of Tomita (U.S. Appl. Publ. No. 2002/0003799).

Claims 15, 21 and 29 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hoogenboom in view of Tomita, and in further view of Yasuda et al. (U.S. Patent No. 6,754,275).

Claims 13 and 14 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hoogenboom in view of Tomita, and in further view of Le Roux et al. (U.S. Patent No. 6,618,438).

Claims 17 and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hoogenboom in view of Tomita, and in further view of Bigham et al. (U.S. Patent No. 5,677,905).

Claim 18 is rejected under 35 U.S.C. § 103(a) as unpatentable over Hoogenboom in view of Tomita, and in further view of Watkins (U.S. Appl. Publ. No. 2004/0039796).

VII. ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,517,250 and U.S. Appl. Publ. No. 2002/0003799

Claim 12

As an initial matter, appellant respectfully notes that the language of claim 12 recited on page 3 of the final Office Action of October 5, 2011 does not correspond to the language of currently pending independent claim 12 that is currently involved in this appeal. In particular, the Office Action fails to specifically address the phrase “the first and second transmission units being configured for network transmission and being different from video coding units of the first and second encoded picture.” Furthermore, the Office Action refers to the limitation of “the first identification sequence identification has the same value as the second video sequence identification sequence identification when the first and the second encoded picture belong to the same group of pictures” that is not present in currently pending claim 12. Appellant discussed these issues with the Examiner on November 22, 2011, and the Office issued an Interview Summary of December 5, 2011 that asserts that despite not particularly addressing the correct limitations of claim 12 Hoogenboom none-the-less discloses the limitations of claim 12.

While appellant respectfully disagrees with the Office’s assertions in both the final Office Action and the Interview Summary for the reasons presented below, appellant points out these inconsistencies and inaccuracies in the final Office Action so as to reduce the likelihood of confusion when the Board is reviewing the prosecution history of this applicant on appeal. Appellant respectfully notes that the final Office Action is not the first time that the Office has issued Office Actions that address the incorrect set of claims. For example, the Office Action dated January 12, 2010 was directed to an older version of the claims instead of the amended claims that had been filed with the previous response, and the older version of the claims included non-existent claim limitations. Likewise, a similar problem was presented in the Office Action of June 8, 2010. Furthermore, the Office Action of November 19, 2010 included claim language that had the wrong phrasing, as well as non-existent claim limitations from older versions of the claims. A similar problem was also presented in the Office Action of May 19, 2011. Accordingly, appellant has identified these deficiencies and inaccuracies in the examination of the present application in order to reduce the likelihood that the Board is

confused when reviewing the prosecution history of the present application. However, for at least the following reasons, appellant respectfully submits that claim 12 is not disclosed or suggested by the cited references.

The cited references relate to different kinds of systems than the invention as recited in claim 12. Therefore, the cited references are not concerned with the problems that arise in the more modern systems that the claimed invention relates to. As a result, any similarity between the cited references and the invention is at most semantic and accidental, and the present claim language of claim 12 avoids such similarity. There is no technical basis why any of the cited references would disclose or suggest all of the limitations recited in claim 12.

The cited references relate to MPEG-2 video and its transmission. See e.g. Hoogenboom column 2; Yasuda column 1; Tomita page 1. Such systems are limited in their flexibility in such a way that the video data is encoded for decoding in a certain order, packetized and transmitted in the same order. In addition, some systems for transmission use a synchronic decoding and display so that the decoding and display is synchronized to a system clock. These systems often have issues with synchronization and lost pictures/data, and such problems are targeted in the cited references. On the other hand, there is naturally no issue in such systems about determining the decoding order of data

More modern systems such as the H.264 video codec and the related transmission protocols allow transmission of video coding data in a different order than the decoding order. This makes the handling of the video stream much more flexible, and provides other advantages e.g. error resiliency and recovery. For example, synchronized decoding or any time stamps are no longer needed. On the other hand, determining of decoding order and buffering data for reordering of coded video data for decoding need to be taken care of. An exemplary embodiment of the present invention as recited in claim 12 is targeted at the determination of decoding order of information in transmission units. This problem is not present in the systems of the cited references, and therefore the cited references necessarily fail to disclose or suggest features and/or solutions that may be used in addressing such problems.

Appellant respectfully submits that claim 12 is not disclosed or suggested by Hoogenboom and Tomita, because Hoogenboom and Tomita fail to disclose or suggest all of the limitations recited in the claims. Appellant respectfully submits that Hoogenboom at least fails

to disclose or suggest that the first and the second identifier are different from time stamps of the first and second encoded picture. Furthermore, Hoogenboom fails to disclose that different identifiers are formed for different transmission units. More specifically, Hoogenboom is unclear about how e.g. the time stamps are formed. Further, Hoogenboom fails to disclose that any identifiers are indicative of the decoding order of the data in the transmission units.

In Hoogenboom, the identifiers that the Office refers to are decoding time stamps (DTS). While this looks semantically relevant, in fact in systems where synchronous decoding is not used, the DTS is of little use, and may e.g. be completely omitted. In Hoogenboom, there are no other identifiers than decoding time stamps that would be formed for transmission units and would serve as indicators of decoding order. Furthermore, the decoding time stamp (DTS) does not provide for a way to determine the decoding order. For example, not all packets carry the DTS (e.g. SEI packets), and since the same picture has the same DTS, the DTS does not provide for the decoding order. More meaning than what is disclosed should not be read into the concept of DTS as discussed in Hoogenboom. In particular, Hoogenboom or any of the cited references do not disclose or suggest that the DTS would be indicative of the decoding order. Instead, DTS is used to determine the time when the decoding of the packet should be started. See Hoogenboom column 11, lines 26-37.

In addition, Hoogenboom is directed to solving a completely different problem than what the present invention as recited in claim 12 is directed to. Hoogenboom addresses the issue of having to access the decoding time stamp (DTS) in a packetized elementary stream (PES) in an MPEG-2 system multiple times during decoding. Hoogenboom solves this issue by buffering the DTS in a DRAM memory. In Hoogenboom, if a picture never arrives whose DTS has been buffered, a new DTS can overwrite the stale DTS in the memory. However, this has nothing to do with providing an identifier indicative of the respective decoding order of information in the transmission units, as recited in claim 12. In contrast to Hoogenboom, the present application, and the current claims of the present application, are not directed towards DTS, and as discussed above DTS does not correspond to an identifier indicative of the respective decoding order of information in a transmission, as recited in claim 12. Therefore, for at least this reason, claim 12 is not disclosed or suggested by the cited references.

Furthermore Tomita does not make up for the deficiencies in the teachings of Hoogenboom discussed above. Specifically, Tomita at most discloses time stamps for the pictures, and these time stamps discussed in Tomita are not suitable for determining decoding order for the reasons stated above. Specifically, it is apparent from Figures 9 and 10, and paragraph [0055] of Tomita that the system keeps the time stamps of the video data and the RTP packets in synchrony by duplicating the time stamp information from the PCR into the RTP header. The Office asserts on page 4 of the final Office Action of October 5, 2011 that “the sequence number is well known in the art and compliant with standard protocols.” The Office is appearing to assert that Tomita would make up for the deficiencies in the teachings of Hoogenboom identified on page 4 of the final Office Action. However, it is unclear to what this statement refers to since there is no sequence number in the present claims, and it is unclear to what such a sequence number is in Tomita. It is possible that the Office is referring to the RTP packet sequence number in Fig. 3. However, in modern video systems the transmission can happen out of decoding order, so the RTP sequence number is clearly not suitable for determining the decoding order of data in the RTP packet. In Tomita, the RTP time stamp is a clone of the PCR time stamp (the video decoder system time). Therefore, the Tomita time stamp is a picture time stamp. Tomita is concerned with keeping the PCR time and the RTP time synchronized. See Tomita Figure 10.

Therefore, it is unclear why a skilled person would choose to combine Tomita to Hoogenboom. Tomita is not concerned with the problem of determining the decoding order, which is a major deficiency in Hoogenboom. Instead, Hoogenboom and Tomita work with different problems of video coding. Consequently, even if Tomita is combined with Hoogenboom, the combination does not allow for determining the decoding order, and is not in the scope of the claims. The only motivation to combine Hoogenboom and Tomita provided by the Office is the statement that Tomita is “in the same field of endeavor” as Hoogenboom, and therefore “it would have been obvious for one of ordinary skill in the art at the time of the invention to modify the invention of Hoogenboom in view of Tomita.” However, the Office has provided no motivation as to why one of ordinary skill in the art would be motivated to combine the teachings from Hoogenboom and Tomita to arrive at the limitations recited in claim 12. Instead, it appears that the Office has merely selected certain teachings from each reference and

asserted that the combination would disclose the limitations recited in claim 12. As discussed above, the cited references do not disclose or suggest the teachings asserted by the Office, and even if the cited references did, which appellant does not admit, the Office has provided no proper motivation to combine the cited references.

Therefore, for at least the reasons discussed above, claim 12 is not disclosed or suggested by the cited references.

Claims 16, 20, 22-25, 27-28 and 30

Independent claims 16, 20, 22-25, 27-28 and 30 contain limitations similar to those recited in claim 12, and therefore for at least the reasons discussed above with respect to claim 12, are not disclosed or suggested by the cited references.

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,517,250, U.S. Appl. Publ. No. 2002/0003799 and U.S. Patent No. 6,754,275

Claims 15, 21 and 29

Claims 15, 21 and 29 ultimately depend from an independent claim, and therefore are not disclosed or suggested by the cited references at least in view of their dependencies.

In addition, Yasuda is concerned with groups of pictures and pictures, and does not mention slices. Specifically, the citation of Yasuda column 10, lines 40-50 on page 4 of the final Office Action of October 5, 2011 does not contain disclosure or suggestion about video coding slices, but instead talks about different types of pictures and groups of pictures. In fact, Yasuda does not mention slices, and for at least this additional reason Yasuda fails to make up for the deficiencies in the teachings of the cited references, and claims 15, 21 and 29 are not disclosed or suggested by the cited references.

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,517,250, U.S. Appl. Publ. No. 2002/0003799 and U.S. Patent No. 6,618,438

Claims 13 and 14

Appellant respectfully submits that Le Roux fails to make up for the deficiencies in the teachings of Hoogenboom identified above, and therefore claims 13 and 14 are not disclosed or suggested by the cited references at least in view of their dependencies.

In addition, Le Roux is directed to effective stream switching, and involves the manipulation of DTS of the two streams between which switching is taking place. DTS are problematic in the sense that they dictate the decoding time of an image in a fixed manner, and in stream switching attention needs to be paid to having the correct decoding time stamps in the streams. Since Le Roux is concerned with decoding time stamps, there is no disclosure of integer numbers, wrap around schemes or the like. Instead, Le Roux merely discusses time instances and DTS values, i.e. time values, and the purpose of a DTS is different from the identities, as recited in claims 13-14. See Le Roux column 6, lines 42-47. Therefore, for at least these additional reasons, claims 13-14 are not disclosed or suggested by the cited references.

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,517,250, U.S. Appl. Publ. No. 2002/0003799 and U.S. Patent No. 5,677,905

Claims 17 and 19

Claims 17 and 19 ultimately depend from independent claim 16, and Bigham fails to make up for the deficiencies in the teachings of Hoogenboom identified above. Therefore, claims 17 and 19 are not disclosed or suggested by the cited references at least in view of their dependencies.

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,517,250, U.S. Appl. Publ. No. 2002/0003799 and U.S. Appl. Publ. No. 2004/0039796

Claim 18

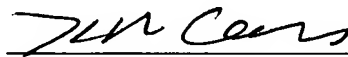
Claim 18 ultimately depends from independent claim 16, and Watkins fails to make up for the deficiencies in the teachings of Hoogenboom identified above. Therefore, claim 18 is not disclosed or suggested by the cited references at least in view of its dependency.

Conclusion

For the reasons discussed above, appellant respectfully submits that the rejections of the Office Action have been shown to be inapplicable, and respectfully requests that the Board reverses the rejections to pending claims 12-25 and 27-30. If any additional fee is required for submission of this Appeal Brief, the Commissioner is hereby authorized to charge Deposit Account No. 23-0442.

Respectfully submitted,

Date: 29 February 2012



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CLAIMS APPENDIX

The claims involved in the appeal are as follows:

12. A method for ordering encoded pictures comprising a first and a second encoded picture, comprising:

forming at least a first transmission unit on the basis of the first encoded picture, and
forming at least a second transmission unit on the basis of the second encoded picture,
the first and second transmission units being units configured for network transmission
and being different from video coding units of the first and second encoded picture,

defining a first identifier of said first transmission unit and a second identifier of said
second transmission unit, the first and the second identifiers being indicative of the respective
decoding order of information included in the first transmission unit and information included in
the second transmission unit and the first and the second identifiers being different from the
video coding units of the first and the second encoded picture and from time stamps of the first
and the second encoded picture.

13. The method according to claim 12, wherein the identifier is defined as an integer number.

14. The method according to claim 13, wherein a larger integer number with wrap around
indicates a later decoding order.

15. The method according to claim 12, wherein said first transmission unit includes a first
slice and said second transmission unit includes a second slice.

16. A device for ordering encoded pictures comprising a first and a second encoded picture, the device comprising:

an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, and

a definer for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

17. The device according to claim 16, wherein it is a gateway device.

18. The device according to claim 16, wherein it is a mobile communication device.

19. The device according to claim 16, wherein it is a streaming server.

20. An encoder for encoding pictures and for ordering encoded pictures comprising a first and a second encoded picture, the encoder comprising:

an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture, the

first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, and

a definer for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

21. The device according to claim 20, wherein said arranger is arranged to include a first slice into said first transmission unit and a second slice into said second transmission unit.

22. A decoder for decoding encoded pictures for forming decoded pictures, the encoded pictures comprising a first and a second encoded picture transmitted in at least a first transmission unit formed on the basis of the first encoded picture and in at least a second transmission unit formed on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, wherein the decoder comprises a processor for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of a first identifier of said first transmission unit and a second identifier of said second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

23. A system comprising:

an encoder for encoding pictures and for ordering encoded pictures comprising a first and a second encoded picture, the encoder comprising an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, and

a decoder for decoding the encoded pictures,

wherein the system further comprises:

in the encoder a definer for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture, and

a processor in the decoder for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of said first identifier and said second identifier.

24. A computer readable medium encoded with computer executable instructions for performing a method for ordering encoded pictures comprising a first and a second encoded picture, for forming at least a first transmission unit on the basis of the first encoded picture, and

at least a second transmission unit on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, wherein the computer program further comprises computer executable instructions for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

25. A computer readable medium encoded with computer executable instructions for performing a method for ordering encoded pictures comprising a first and a second encoded picture, for forming at least a first transmission unit on the basis of the first encoded picture, and at least a second transmission unit on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, wherein the computer program further comprising computer executable instructions for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

27. A module for ordering encoded pictures for transmission, the encoded pictures comprising a first and a second encoded picture, the module comprising:

an arranger for forming at least a first transmission unit on the basis of the first encoded picture and at least a second transmission unit on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, and

a definer for defining a first identifier of said first transmission unit and a second identifier of said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

28. A module for reordering encoded pictures for decoding, the encoded pictures comprising a first and a second encoded picture transmitted in at least a first transmission unit formed on the basis of the first encoded picture and in at least a second transmission unit formed on the basis of the second encoded picture, the first and second transmission units being units configured for network transmission and being different from video coding units of the first and second encoded picture, wherein the module comprises a processor for determining the decoding order of information included in the first transmission unit and information included in the second transmission unit on the basis of a first identifier of said first transmission unit and a second identifier of said second transmission unit, and the first and second identifiers being different

from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

29. The module according to claim 27, wherein said arranger is configured to include a first slice into said first transmission unit and a second slice into said second transmission unit.

30. A method for ordering encoded pictures comprising a first and a second encoded picture, comprising:

forming at least a first transmission unit encapsulating information of the first encoded picture, and

forming at least a second transmission unit encapsulating information of the second encoded picture,

the first and second transmission units being configured for network transmission and being different from video coding units of the first and second encoded picture,

defining a first identifier in said first transmission unit and a second identifier in said second transmission unit, the first and the second identifiers being indicative of the respective decoding order of information included in the first transmission unit and information included in the second transmission unit, and

the first and the second identifiers being different from the video coding units of the first and the second encoded picture and from time stamps of the first and the second encoded picture.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.